

## REMARKS

In view of the above amendments and following remarks, reconsideration and further examination are requested.

By the current Amendment: claims 15-17, 22, 24 and 26-33 have been amended; claims 18-21, 23, 25 and 34 have been cancelled; and claims 35-65 have been added. For reasons to follow, these claims are believed to be allowable over the references relied upon by the Examiner.

Claims 27, 29 and 31 were rejected under 35 U.S.C. § 102(b) as being anticipated by Buchwalter et al.; claim 27 was rejected under 35 U.S.C. § 102(b) as being anticipated by Lee; claims 28 and 30 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Buchwalter et al. in view of Wu and Yang; claims 28-31 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Lee in view of Wu and Yang; and claims 15-26 and 32-34 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Wu in view of Ohno and Yang. These rejections, and the references relied upon, are not believed to be applicable with regard to the currently amended and newly added claims for the following reasons.

An objective of the instant invention is to prevent a contact from being formed on a substrate in an irregular manner when two types of dielectric films are deposited on transistors which are densely formed in some areas and sparsely formed in other areas on the substrate. The instant invention is characterized in that: when two types of dielectric films are deposited in an area where transistors or interconnections are densely formed in some areas and sparsely formed in other areas, a first dielectric film (lower film) is planarized before a second dielectric film (upper film) is deposited thereon; and then a contact penetrating through the first and second dielectric films is formed. By performing such a method, prevented is a contact from being formed in an irregular manner.

Independent claims 15, 27 and 29 have been amended to recite that

**substantially an entire surface of the first dielectric film is continuous and higher than a top surface of the interconnections just prior to planarizing the first dielectric film.**

New independent claims 35 and 53 also include this limitation.

With regard to Buchwalter et al., in rejecting claims 27 and 29 the Examiner has taken the position that this reference shows the method as recited in these claims, and for support has directed Applicant's attention to Figure 3 and corresponding text of Buchwalter et al. However, Buchwalter et al. does not disclose in FIG. 3 that a surface of the first dielectric film (polymer) is **continuous and higher than** a top surface of the interconnections **just prior to planarizing** the first dielectric film.

In this regard, just prior to the planarization performed in Fig. 3(2)(d) of Buchwalter et al., the polymer layer is either not at all portions higher than top surfaces the interconnects because of the etching performed in (3)(1)(a), or discontinuous because of the etching performed in (3)(2)(c). As such, Buchwalter et al. fails to anticipate any of independent claims 15, 27, 29, 35 and 53, whereby these claims and their dependent claims are allowable over Buchwalter et al.

With regard to Lee, while this reference does disclose stripes 20 which are more sparsely arranged than are stripes 22, along with two dielectric films (48 or 52 and 50), these dielectric films are not disclosed to have **different etching rates** relative to one another, as required by claim 27. Accordingly, claim 27 is not anticipated by Lee, whereby claims 27 and 28 are allowable over Lee. For analogous reasons, independent claims 15, 29, 35 and 53, along with their dependent claims, are also allowable over Lee.

Wu and Yang do not resolve the above deficiencies of Buchwalter et al. and Lee, and accordingly, any combination of Buchwalter et al., Lee, Wu and Yang would not result in the invention as recited in any of independent claims 15, 27, 29, 35 and 53, whereby these claims and their dependent claims are allowable over any possible combination of these references.

With regard to the rejection of independent claims 15 and 32, the Examiner relied upon a combination of Wu, Ohno and Yang to reject these claims. Specifically, with regard to claim 15, Ohno was relied upon for a teaching of different etching rates of dielectrics. As pointed out by the Examiner, Ohno discloses that an etching-stop layer 40 and an insulating interlayer, which is composed of silicon oxide, are formed on a gate electrode, wherein the etching-stop layer 40 is composed of silicon nitride. Thus, it appears as though two types of layers having different etching rates are disclosed in Ohno.

However, neither of Ohno, Wu and Yang teach or suggest the limitation of claim 15 that **substantially an entire surface of the first dielectric film is**

**continuous and higher than a top surface of the interconnections just prior to planarizing the first dielectric film.**

In this regard, while the etching-stop layer 40 of Ohno may appear to correspond to the first dielectric film of the instant invention, the configuration requirements of the first dielectric film as required by claim 15 is not disclosed in Ohno. Additionally, Yang fails to disclose or suggest formation of a contact through first and second dielectric films as required by claim 15. In this regard, a "contact" per se is not described in Yang.

Accordingly, claim 15 is allowable over a combination of Ohno, Wu and Yang.

With regard to claim 32, none of Wu, Yang and Ohno teach or suggest

**planarizing the first dielectric film after the heating of the first dielectric film.**

In this regard, Yang merely discloses that planarization is performed **during** annealing, which is different from performing planarization **after** heating.

Accordingly, claim 32 is allowable over a combination of Ohno, Wu and Yang.

In view of the above amendments and remarks, it is respectfully submitted that the present application is in condition for allowance and an early Notice of Allowance is earnestly solicited.

If after reviewing this Amendment, the Examiner believes that any issues remain which must be resolved before the application can be passed to issue, the Examiner is invited to contact the Applicant's undersigned representative by telephone to resolve such issues.

Respectfully submitted,

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February 22, 2005